

CLAIMS

1. An anti-human gp39 monoclonal antibody of an IgG1 isotype.
2. The anti-human gp39 monoclonal antibody of claim 1 which inhibits B cell proliferation in a standard *in vitro* assay with an IC<sub>50</sub> between about 0.01 and 5.0 µg/ml.
3. The anti-human gp39 monoclonal antibody of claim 2 which inhibits B cell proliferation in a standard *in vitro* assay with an IC<sub>50</sub> between about 0.1 and 2.5 µg/ml.
4. The anti-human gp39 monoclonal antibody of claim 3 which inhibits B cell proliferation in a standard *in vitro* assay with an IC<sub>50</sub> between about 0.1 and 1.25 µg/ml.
5. The anti-human gp39 monoclonal antibody of claim 2, wherein B cell proliferation is induced *in vitro* by treating B cells with interleukin-4 and soluble gp39.
6. The anti-human gp39 monoclonal antibody of claim 1 which inhibits B cell production of IgM, IgG or IgA in a standard *in vitro* assay with an IC<sub>50</sub> between about 0.01 and 1.0 µg/ml.
7. The anti-human gp39 monoclonal antibody of claim 6 which inhibits B cell production of IgM, IgG or IgA in a standard *in vitro* assay with an IC<sub>50</sub> between about 0.01 and 0.1 µg/ml.
8. The anti-human gp39 monoclonal antibody of claim 6, wherein B cell production of IgM, IgG or IgA is induced by culturing B cells with anti-CD3 activated T cells.
9. An anti-human gp39 monoclonal antibody that binds an epitope recognized by a monoclonal antibody selected from the group consisting of: monoclonal antibody 3E4; monoclonal antibody 2H5; monoclonal antibody 2H8; monoclonal antibody 4D9-8; monoclonal antibody 4D9-9; monoclonal antibody 24-31; monoclonal antibody 24-43; monoclonal antibody 89-76; and monoclonal antibody 89-79.
10. The anti-human gp39 monoclonal antibody of claim 9 which binds an epitope recognized by monoclonal antibody 24-31.

11. The anti-human gp39 monoclonal antibody of claim 10 which is monoclonal antibody 24-31.

12. A hybridoma 24-31 designated by ATCC Accession No. HB11712. ✓

13. A monoclonal antibody 24-31 produced by the hybridoma of claim 12.

14. The anti-human gp39 monoclonal antibody of claim 9 which binds an epitope recognized by monoclonal antibody 89-76.

15. The anti-human gp39 monoclonal antibody of claim 14 which is monoclonal antibody 89-76.

16. A hybridoma 89-76 designated by ATCC Accession No. HB11713. ✓

17. A monoclonal antibody 89-76 produced by the hybridoma of claim 16.

18. A pharmaceutical composition comprising the anti-human gp39 monoclonal antibody of claim 1 and a pharmaceutically acceptable carrier.

19. A pharmaceutical composition comprising the anti-human gp39 monoclonal antibody of claim 9 and a pharmaceutically acceptable carrier.

20. A pharmaceutical composition comprising the monoclonal antibody 24-31 of claim 13 and a pharmaceutically acceptable carrier.

21. A pharmaceutical composition comprising the monoclonal antibody 89-76 of claim 17 and a pharmaceutically acceptable carrier.

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